

b) SRS document for credit card processing system

1. Introduction:

1.1 Purpose of the requirements document

To specify the software requirements for credit card processing system.

1.2 Scope of the product: allows customers to make payments credit card at various merchant locations. The system handles the authorization, capture and payment of transactions.

1.3 Definitions, acronyms and abbreviations.

- POS: point of sale
- API: application programming interface
- CVV: card verification value
- EMV: Europay, Mastercard and Visa
- PCI-DSS: Payment card industry data security standard.

1.4 References: Pay Pal, Visa & Mastercard merchant guidelines

1.5 Overview:- The document includes functional, non-functional aspects, constraints & domain specific features. It also describes the process of transaction, initiation, validation, authorization & settlement.

General description:

2.1 Product perspective: The system interacts



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with both external banking networks and internal systems for merchants. The system will integrate with POS devices, mobile payments gateways & online e-commerce platform.

- Bank perspective: Interfaces with bank and card networks to authorize transactions.
- Merchant perspective: They will use the system to process credit card payments.
- Customer perspective: They will use the system to make payments securely using credit card and receive real time authorization responses & view their transaction status.

2.2 Product functions: Transaction authorization, transaction capture, transaction settlement, fraud detection, chargeback management, refund processing.

2.3 User characteristics

- Merchants are business owners or staff processing payments at physical or online stores.
- Customers are individuals making credit card payments.
- Banks are financial institutions that authorize transactions & provide merchant services.

2.4 General characteristics:-

- not comply with PCI-DSS standards for data security.

System should support all major card types

- Transaction above Rs 5000/- need additional authorisation check.

2.5 Assumptions and Dependencies:

- Merchants will ensure that Customer input correct payment details.
- System assumes constant connectivity with banks and card network for real-time authorization.

3. ~~Functional Requirements:~~ Specific Requirements:

- Transaction authorization: Validate card number, expiration date, CVV and ensure enough funds are available for transaction. Provide real time response to merchant and customer.
- Fraud detection: Cross check transactions for unusual patterns based on user history.
- Chargeback handling: Automatically reverse payments when disputes are resolved in favor of the customer.
- Refund management: Enable portal for full refunds for authorized transactions.

3.2 Non-Functional requirements

- Security: Must comply with PCI-DSS standards to ensure data protection.
- Performance: System should handle up to 500 transactions per second.



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- during peak times & avg response time for authorization less than 10 seconds.
- Reliability: uptime should be 99.9% with failover mechanisms in place.

3.3 Domain Requirements:

- Responsive user interface for mobile & desktop users.
- Inventory Management.
- Support multiple payment gateways.

4. Appendices

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